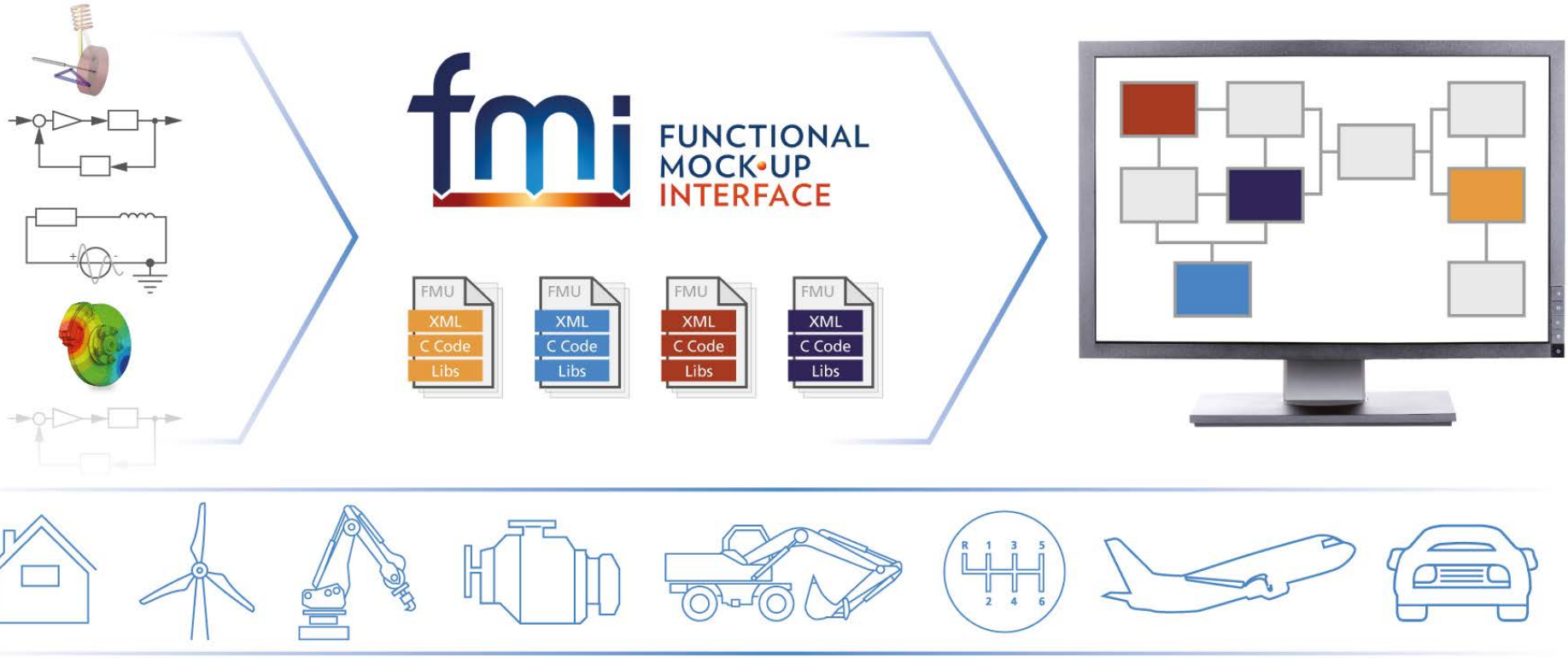
Overview on FMI, SSP, DCP

Torsten Blochwitz, MA Board (ESI ITI GmbH)
Andreas Junghanns, FMI MAP Leader (QTronic)
Jochen Köhler, SSP MAP Leader (ZF)
Martin Krammer, DCP MAP Leader (VIF)

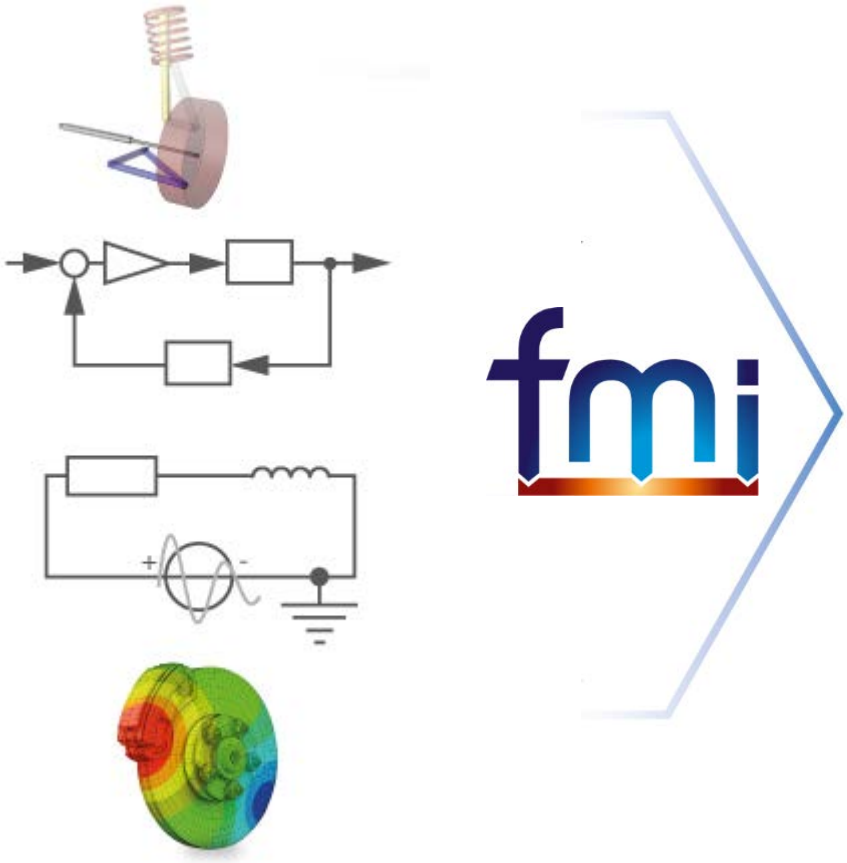
13th International Modelica Conference, Regensburg, 2019, March 4th

FMI, SSP, DCP


fmi
FUNCTIONAL
MOCK-UP
INTERFACE
FMU
XML
C Code
Libs
FMU
XML
C Code
Libs
FMU
XML
C Code
Libs
FMU
XML
C Code
Libs

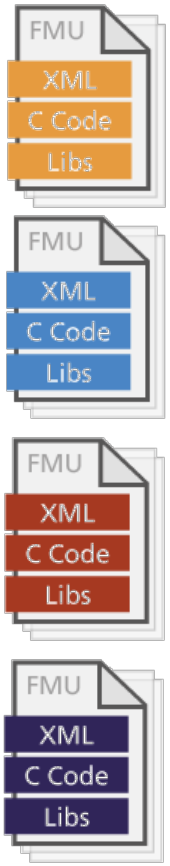
FMI: Functional Mock-up Interface

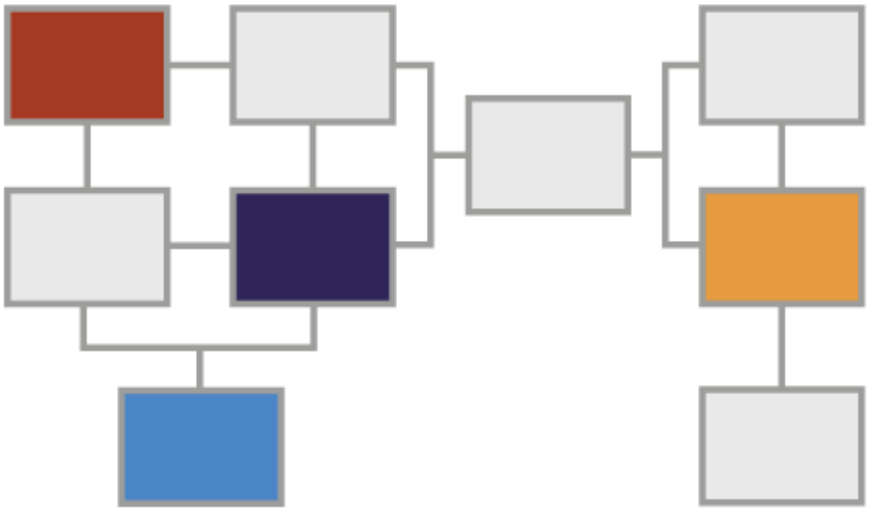
- Semantics, API and XML format for exchange of simulation models and co-simulation



SSP: System Structure and Parametrization

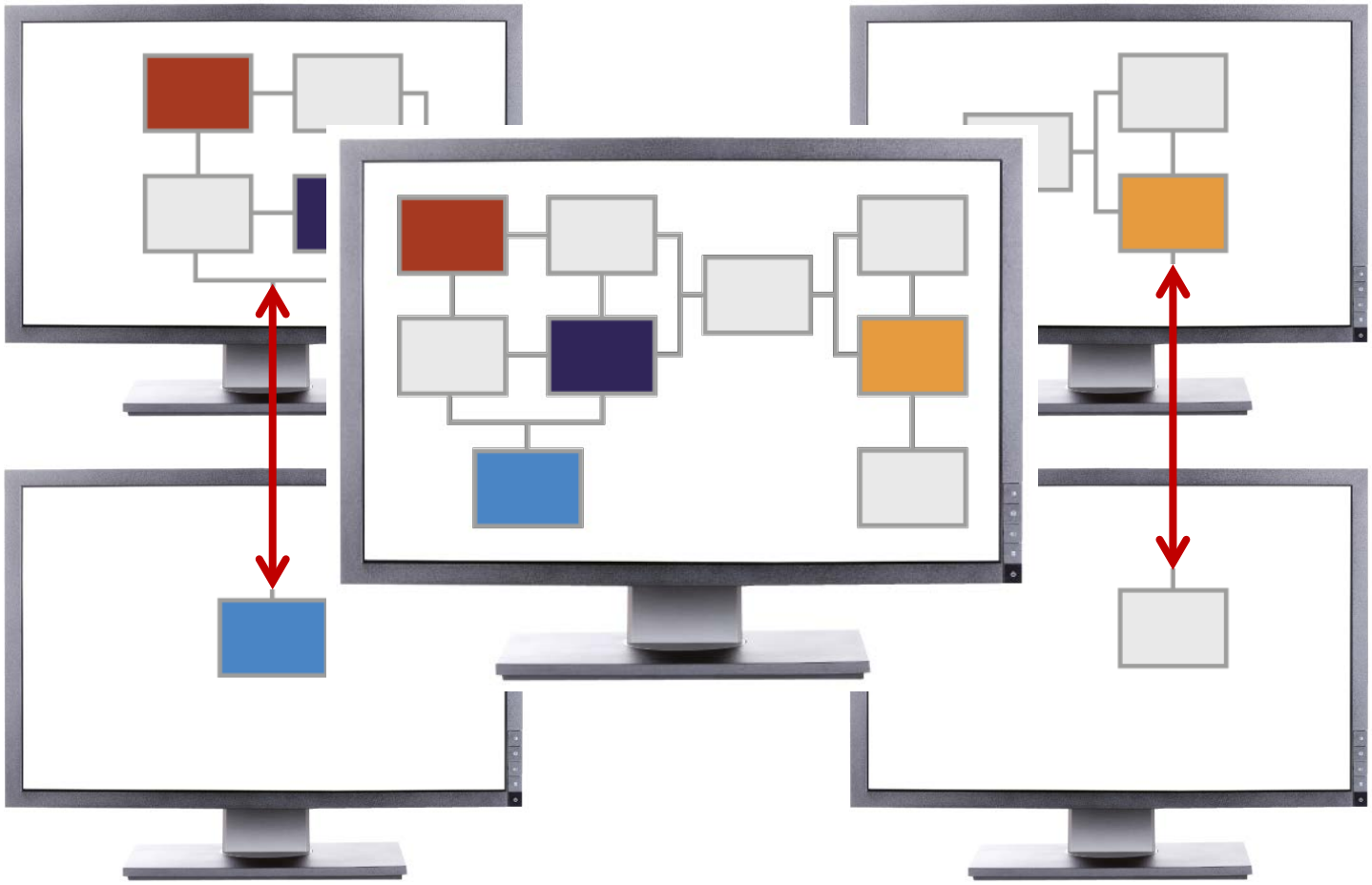
- File format and XML schemas for description of architectures and sets of parameters





DCP: Distributed Co-Simulation Protocol

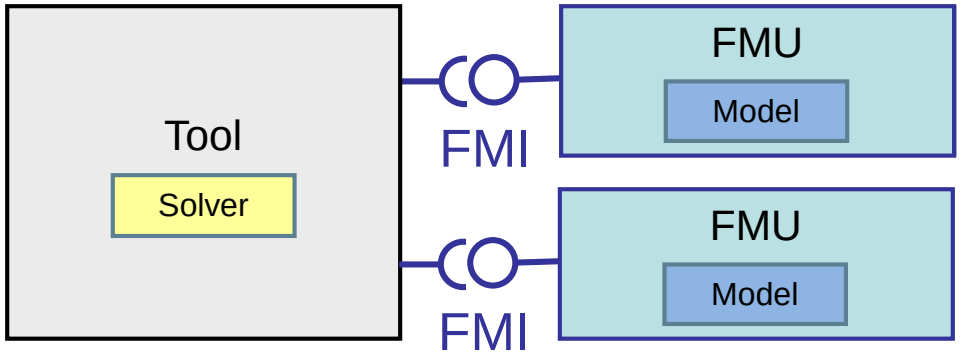
- Semantics, protocol and XML schema for network based co-simulation



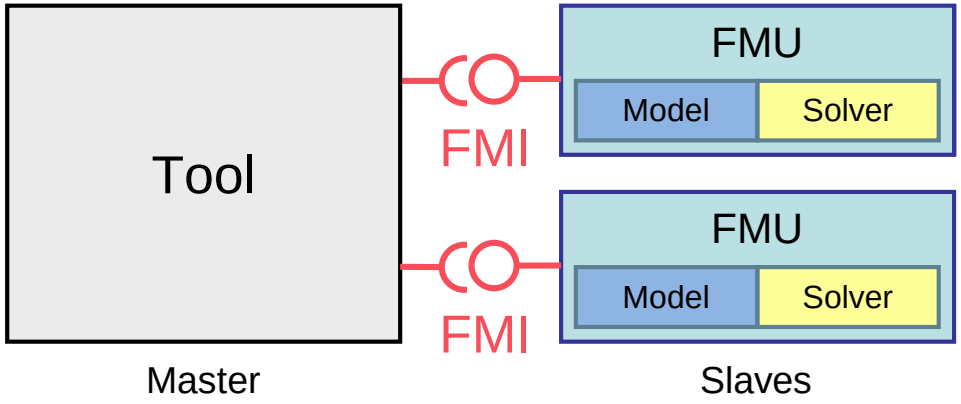
FMI

FMI – Main Design Idea

FMI for Model Exchange



FMI for Co-Simulation



FMI - Status

Available:

- FMI 1.0 and 2.0 released (2010 and 2014 respectively)
- FMI 1.0.1 as maintenance release available

Next Maintenance Releases:

- No new features, but corrections and clarifications
- FMI 2.0.1: in development

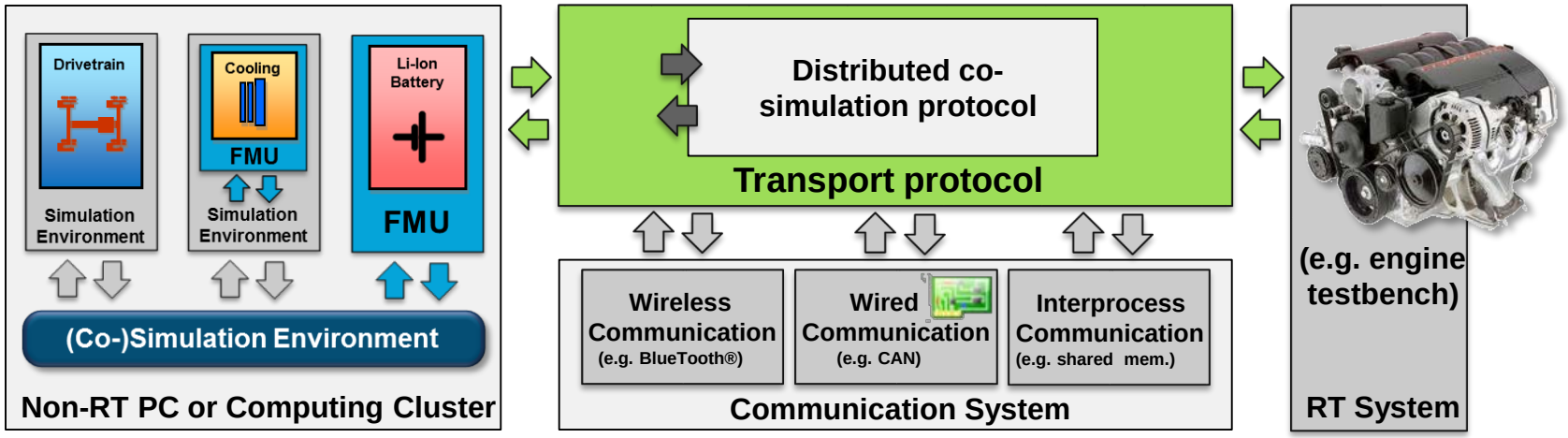
Next Full Releases:

- 6 FMI Working Groups develop new features for 3.0
- Alpha Features List was published in December 2017
- Next FMI design meeting here in a few days

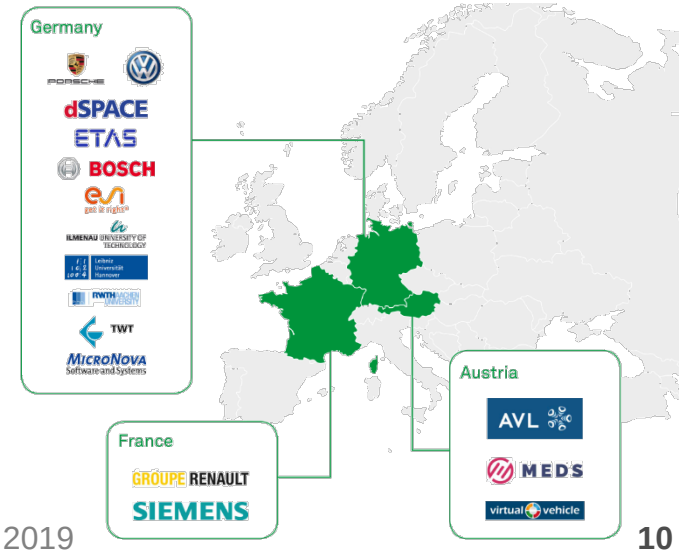
DCP

The Distributed Co-Simulation Protocol (DCP)

- What is it?



- Who developed it?
  - Main result of European ITEA3 research project ACOSAR
  - Strong automotive consortium



The Distributed Co-Simulation Protocol (DCP)

- What is the current status?
  - Granted MAP DCP in July 2018
  - Released TODAY
    - DCP specification document version 1.0
    - Reference implementation, schema files,…)

- What are our plans?
  - Collect feedback
  - Align with other MAPs

- Contact
  - Website: www.dcp-standard.org
  - Mailing list available
  - *Join my paper talk on Tue 11:50h!*
  - MAP DCP Leader martin.krammer@v2c2.at